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ABSTRACT

This paper discusses the relation between feelings about body development and other aspects of self-image such as social relations, external mastery and impulse control. The Offer Self-Image Questionnaire was administered to about 400 sixth grade students in two middle class suburban school districts. Results indicate that, compared to boys of the same age, sixth grade girls were less satisfied with the changes in their bodies, were less proud of their bodies, were more likely to feel ugly and unattractive, were more likely to think that others see them as poorly developed, and felt less strong and healthy. Overall, however, both boys and girls at this age felt that positive statements about their bodies described them well or fairly well and that negative statements did not. When sixth grade girls were compared with older girls of comparable background, a trend toward more positive body image with age was found. Body image was related to affective and social questionnaire items. There seemed to be a linear relationship between satisfaction with body change and feeling that a boyfriend was important. Satisfaction with body changes was related to no other variables. For girls, but not for boys, a feeling of tension was unrelated to body image. Body image in boys appeared to be more frequently and more strongly related to other aspects of self-image than among sixth grade girls. These preliminary results suggest that sixth grade girls have a generally less positive body image than same-aged boys and older girls. (Author/RH)

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The Psychological Significance of Pubertal Changes to Adolescent Girls

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PS 010921

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Presented in a symposium "Psychological Correlates of Puberty" at the biennial meeting of the Society for Research in Child Development in San Francisco, March 1979.

My colleagues[1] and I are just beginning a longitudinal study of early adolescent development. We actually began last September with the initial questionnaires but due to teacher strikes last fall and our abundant snow this winter, we are only now starting our interviews. So my presentation today is based on data from the Offer Self Image Questionnaire. I will be focusing on the relation between feelings about body development and other aspects of self-image. Sixth grade girls will be compared to sixth grade boys as well as to older girls.

Background

Let me first provide a framework for my view of early adolescence. The existing evidence suggests that it is a difficult transitional period. Until recently, however, the causes of any difficulties have been primarily speculative. Roberta Simmons, Dale Blyth and their colleagues (Simmons, Rosenberg, & Rosenberg, 1973; Simmons & Rosenberg, 1975 Simmons, Blyth, & Bush, 1973; Simmons, Blyth, Van Cleave, & Bush)

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[1] Daniel Offer, M.D., Brenda Solomon, M.D., Jeffrey Mitchell, M.D., Susan Franzen, Ph.D., and Susan Shapiro, Ph.D.

have provided new data to inform our understanding of early adolescent problems. The research of John Coleman and colleagues (Coleman, 1978; Coleman, George & Holt, 1977; Coleman, Herzberg, & Morris) which resulted in Coleman's (1978) focal theory, has been useful to me in integrating the various findings. He proposes that difficulties happen in development when more than one of the usual, frequently stressful, issues of adolescence occur simultaneously. His research showed that problems with peers, or with parents, crop up sequentially for most young people so that the adolescent can resolve one issue at a time. Most individuals can endure some amount stress without major effects on affective and behavioral functioning. But too much stress in all but the few exceptionally resilient individuals may cause a disruption in functioning. This model seems especially appropriate for early adolescence and indeed fits Simmon's data quite well. I would only add to the model the variable of individual differences, which include both previous experiences and individual capacity for adaptation to new experiences. The resulting model allows for smooth development in some adolescents and tumultuous development in others.

Simmons et al. (1978) considered several variables -- puberty, dating, new school setting, and achievement among others -- in terms of their impact upon self esteem in early adolescence. We (Petersen & Taylor, in press) have taken a slightly different approach to these issues in considering what seemed to us to be an exhaustive categorization of the ways that psychological adaptation is influence by pu-

berty. After examining possible direct and indirect effects of pubertal change, we concluded that past research supports indirect models, mediated by sociocultural and individual psychological factors. Slide 1 presents a schematic for considering biopsychosocial development over the life span (from Petersen, in press). Early adolescence is fascinating from this perspective, as there are clear contributions from both biological and sociocultural influences on psychological levels at this time. Slide 2 shows some hypothetically important paths between pubertal changes and psychological responses, these hypotheses based on previous research (see Petersen & Taylor, in press, for a review). Peer and parental responses as well as attractiveness standards may mediate the adolescent's responses to secondary sex characteristic development, body image, self image, self esteem, and gender identity. Of interest to me in another study is the specific question of the effects of pubertal hormone on psychological functioning in girls. Slide 3 represents some hypothesized pathways for the influence of pubertal hormones on constructs such as gender identity, self-image, and self-esteem. It is difficult to unconfound any direct hormonal effects from the social and personal stimulus effects of their manifestations, a maturing body. Indeed, all of these figures necessarily omit important variables in order to present a few narrow hypotheses.

Our Study

This brings me to our data. We administered the Offer Self-Image

Questionnaire (OSIQ) (Offer, Ostrov, & Howard, 1977) to about 400 sixth grade students in two middle class suburban school districts. The OSIQ consists of 130 statements to which the subject responds using a six-point Likert scale. The OSIQ has eleven scales originally designed for adolescents of at least 14 years of age, nine scales were useable and reliable with subjects this young. In addition, one or two items on most of the remaining scales had to be deleted because they lacked good psychometric properties.

Six items on the Body and Self Image Scale of the OSIQ specifically refer to body image. They are shown in Table 1, in the handout along with the means and standard deviations for this sample. Compared to boys of the same age, sixth grade girls are less satisfied with the changes in their bodies, are less proud of their bodies, are more likely to feel ugly and unattractive, are more likely to think that others see them as poorly developed, and feel less strong and healthy. Overall, however, both boys and girls at this age felt that the positive statements about their bodies described them well or fairly well and that the negative statements did not really describe them. A slight exception to this generalization is that girls, on the average, felt that the statement about the changes in their bodies being satisfying did not quite describe them. This may be due in part to the ambiguity here where pubertal development has not yet begun. For example, one girl raised her hand about this question. She pointed to it and said, "That's just the problem, there haven't been

any changes yet!" This comment suggests another issue important to keep in mind. Relatively few sixth grade boys will have begun puberty; hence, there is less likely to be anxiety among them about body changes. For most girls, puberty is well underway in sixth grade.

Table 2 compares the sixth grade girls with two older groups of girls of comparable background. With all items there appears to be some trend toward more positive body image with age. The trends are significant (χ^2_{10} has $p < .05$) with three items: satisfaction with body changes, worry about health, and feelings that others see her as poorly developed.

Table 3 shows the associations between the body image items and other items hypothesized to be particularly important for early adolescents. Body image is indeed related to the affective and social items. Perhaps the most interesting aspect of this table are the specific absences of association. The only thing associated with satisfaction with changes for girls is whether or not having a boyfriend is important. In this case there seemed to be a linear relationship between satisfaction and feeling that a boyfriend was important. But in no other case did satisfaction with the changes relate to other variables. The result is especially interesting given that girls were relatively dissatisfied compared to boys of the same age and compared to older girls.

Another case of few associations is with tension. For girls, a feeling of tension is unrelated to body image, while for boys it does seem to be related.

Not counting the satisfaction item, there are about as many associations between the body image items and other items for boys as for girls. There are slightly different patterns but many associations for both boys and girls. Little can be made of the number of associations given that these items are not independent.

Table 4 shows the significantly non-zero correlations between the body image items and the OSIQ scales. A picture similar to that in the last table is shown here regarding the "satisfaction with changes" item. Indeed, for girls this item is negatively related to self image on two of the scales, with no relation to most of the others.

There seems to be a tendency for body image in boys to be more frequently and more strongly related to other aspects of self-image than in sixth grade girls. There are 51 significant correlations for boys compared to 39 for girls, two of these negative. With 37 of the boys' correlations, the magnitude is at least .05 higher than the girls' correlation. Only with the "strong and healthy" body image item are the associations generally stronger for girls.

Discussion

These preliminary results suggest that sixth grade girls have a generally less positive body image than same-aged boys and older girls. Body image is associated with other feelings about self for both boys and girls but the relationships appear more numerous and stronger for boys than for girls. This latter result is surprising at first. Simmons has repeatedly found lower self-esteem in girls compared to boys of this age. If girls' body image is less positive as well, we might speculate that body image would be more salient to the self-concept of girls than that of boys. But we might also argue that sex stereotypes integrate body and other aspects of self better for males than females. Especially in the past, being fit and strong has been more important for boys. Specific aspects of female bodies have been important but perhaps not in an intergrated way. The results puzzle me and I'd enjoy hearing about any data or ideas that you might have.

We hope that our interview material will best illuminate this issue. Ironically, mothers may provide us with more information than their daughters as to feelings about pubertal changes. Our pilot studies suggest that pubertal girls have great difficulty acknowledging any feelings about the changes. Yet, less direct information, as well as reports from older girls, suggests that anxiety about the pace and outcome of puberty is of major importance to these girls. I hope we will have data illuminating this issue by the next SRCD meeting!

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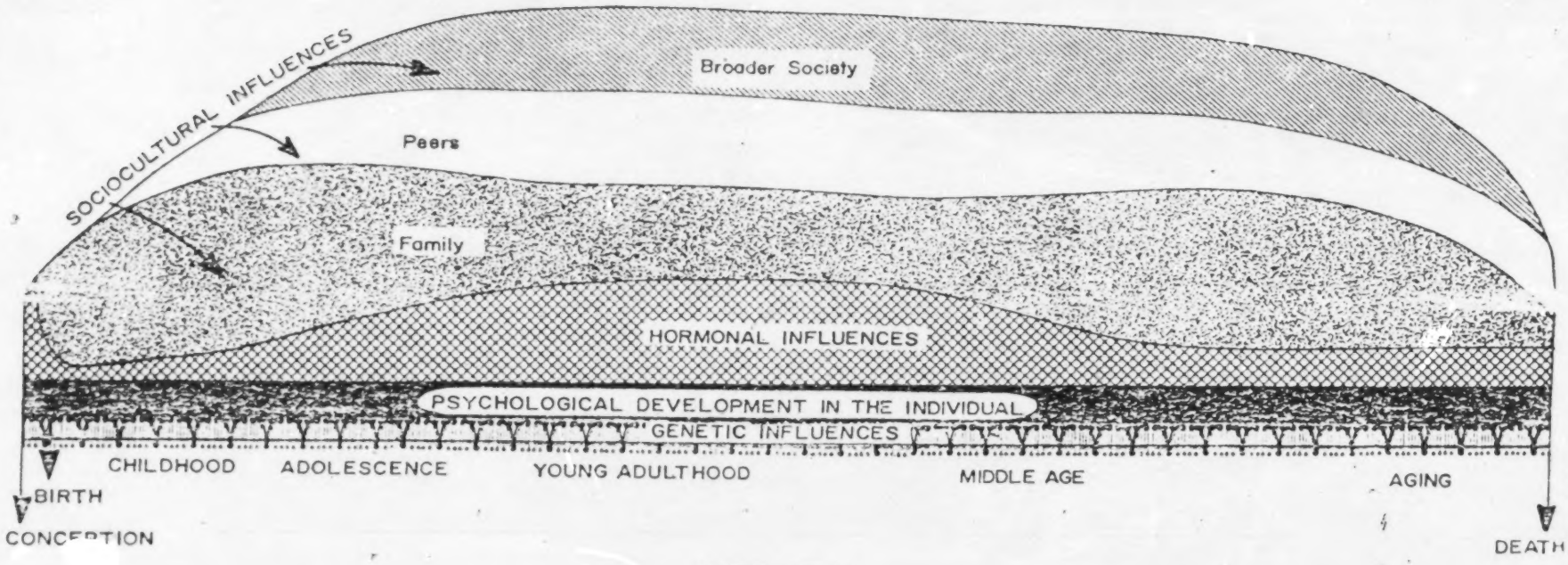
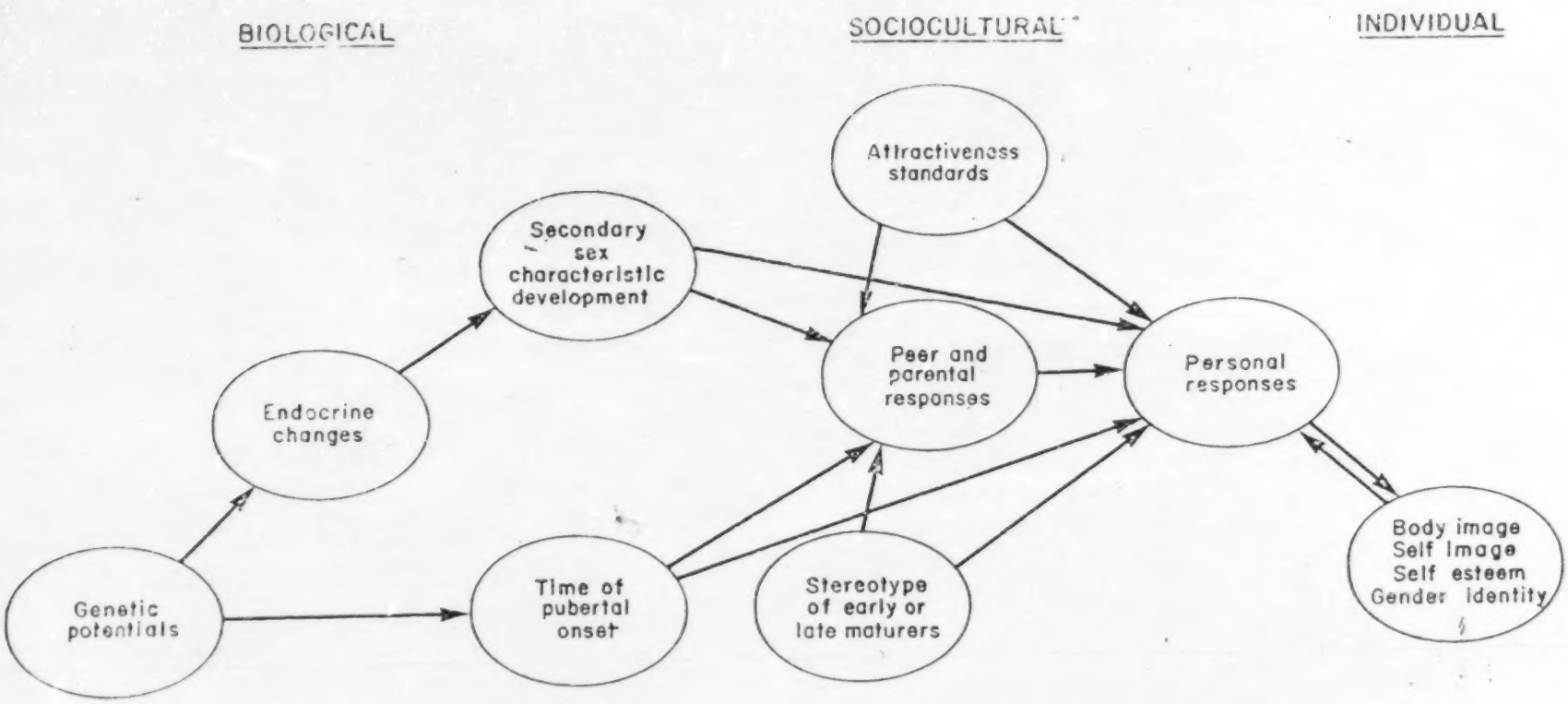

SOCIOCULTURAL INFLUENCES
Broader Society
Peers
Family
HORMONAL INFLUENCES
PSYCHOLOGICAL DEVELOPMENT IN THE INDIVIDUAL
GENETIC INFLUENCES
CHILDHOOD
ADOLESCENCE
YOUNG ADULTHOOD
MIDDLE AGE
AGING
BIRTH
CONCEPTION
DEATH

LIFE SPAN



Hypothetically important paths between secondary sex characteristic development and psychological responses.

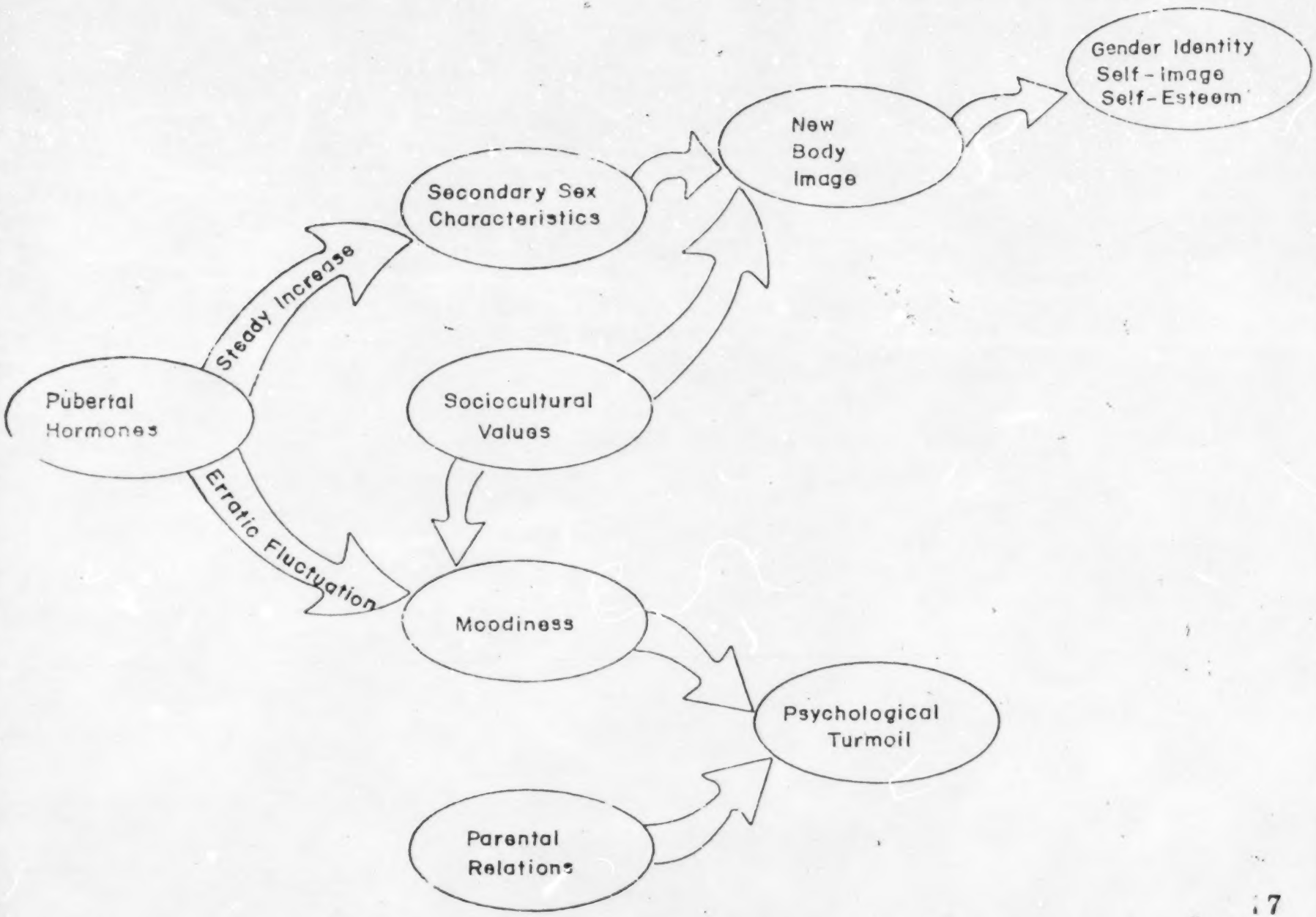

Gender Identity
Self-Image
Self-Esteem
New
Body
Image
Secondary Sex
Characteristics
Steady Increase
Pubertal
Hormones
Sociocultural
Values
Erratic Fluctuation
Moodiness
Psychological
Turmoil
Parental
Relations

Table 1

Means[1] (Standard Deviations) for

Body Image Items by Sex[2]

Item	Boys (n=187)	Girls (n=202)	Boy - Girl Difference in Std. Dev. Units
1. The recent changes in my body have given me some satisfaction.	3.23 (1.54)	3.98 (1.38)	-0.51
2. In the past year I have been very worried about my health.	4.60 (1.63)	4.84 (1.37)	-0.16
3. I am proud of my body.	2.42 (1.35)	3.28 (1.36)	-0.63
4. I frequently feel ugly and unattractive.	4.59 (1.59)	4.07 (1.40)	0.35
5. When others look at me they must think that I am poorly developed.	4.94 (1.36)	4.59 (1.27)	0.34
6. I feel strong and healthy.	1.91 (1.21)	2.20 (1.15)	-0.25

[1]The responses are:
1 - describes me very well
2 - describes me well
3 - describes me fairly well
4 - does not quite describe me
5 - does not really describe me
6 - does not describe me at all

[2]Except with item 2, all differences between boys and girls are significant at at least the .05 level.

Table 2

A Comparison of Body Image Among Girls at Three Adolescent Ages[1]

Percentage Selecting Responses: Describes me

	Item		very well	well	fairly well	not quite	not really	not at all
1.	Satisfaction with changes	P[1]	3.0	8.1	33.0	19.8	15.7	20.3
		Y	15.2	24.2	30.3	14.1	8.7	7.6
		O	49.4	29.2	12.3	4.5	2.6	1.3
2.	Worried about health	P	2.5	4.5	11.4	15.3	19.3	46.0
		Y	8.3	2.9	10.5	10.1	18.8	49.5
		O	1.3	1.9	3.9	6.5	7.8	78.6
3.	Proud of body	P	9.9	14.9	39.6	16.3	8.9	9.4
		Y	8.3	25.3	31.8	19.5	9.7	5.4
		O	13.0	20.8	27.9	21.4	11.0	5.8
4.	Feel ugly and un-attractive	P	5.4	8.9	18.3	21.8	29.2	15.3
		Y	10.1	8.3	17.0	25.0	23.9	15.6
		O	1.3	3.9	13.6	26.6	33.8	20.8
5.	Others see me as poorly developed	P	2.5	4.6	8.6	30.5	22.8	31.0
		Y	2.5	1.4	5.8	17.4	28.6	44.2
		O	0.6	0.6	3.2	11.0	26.6	57.8
6.	Feel strong and healthy	P	34.2	28.7	23.8	8.9	2.0	1.5
		Y	41.0	30.9	18.3	6.5	2.2	1.1
		O	57.8	24.7	11.7	3.2	1.3	1.3

[1] P = pubertal - 6th grade (n=202), Y = young - ages 13,14 (n=278), O = old - ages 15,16 (n=154)

Table 3

Associations[1] Between Body Image and Other Items

	Body Image Items													
	1 Satisfaction with changes		2 Worried about health		3 Proud of body		4 Feel Ugly/ unattractive		5 Poorly developed		6 Strong/ healthy		Total Associations	
	F	M	F	M	F	M	F	M	F	M	F	M	F	M
1. I feel tense most of the time.(2)[2]				*1		*2		*3		*4	*1	*4	1	5
2. I feel inferior to most people I know.(2)			*4	*4	*4	*1	*4	*2	*4	*2	*4		5	4
3. Most of the time I am happy. (2)		*1	*4	*4	*4	*1	*4	*4		*4	*4		4	5
4. I frequently feel sad. (2)		*3	*2	*4		*4	*4	*4	*1	*4		*4	3	6
5. I think that other people just do not like me. (4)		*4	*4		*4	*4	*4	*4	*4	*4	*4	*2	5	5
6. I find it extremely hard to make friends. (4)			*2		*4	*2	*4	*4	*4	*4	*4	*3	5	4
7. I do not have a particularly difficult time in making friends.(4)		*4	*2		*2	*2	*4	*4	*2	*3	*4	*4	5	5
8. Being together with other people gives me a good feeling. (4)		*2	*4		*4	*3	*4	*4	*3	*4	*4	*4	5	5

Table 3 (cont.)

Body Image Items

	1 Satisfaction with changes		2 Worried about health		3 Proud of body		4 Feel Ugly/ unattractive		5 Poorly developed		6 Strong/ healthy		Total Associations	
	F	M	F	M	F	M	F	M	F	M	F	M	F	M
9. I think that boys/girls find me attractive. (6)		$*^3$			$*^4$	$*^4$	$*^4$	$*^4$	$*^4$	$*^2$	$*^2$	$*^3$	4	5
10. Having boy-friend/girl-friend is important to me. (6)	$*^3$	$*^4$	$*^2$		$*^2$	$*^1$	$*^4$	$*^3$	$*^1$			$*^4$	5	4
11. At times I feel like a leader feel that other kids can learn something from me. (9)			$*^3$	$*^2$	$*^4$	$*^1$	$*^4$	$*^2$	$*^4$		$*^4$		5	3
12. I am a superior student in school. (11)		$*^4$	$*^4$		$*^4$	$*^1$	$*^2$	$*^2$		$*^4$	$*^4$		4	4
Total Ass'ns	1	8	10	5	10	12	11	12	9	10	10	8	51	55

[1] Associations with a significant χ^2_{25} are shown.

$*^1$ $p < .05$
$*^2$ $p < .01$
$*^3$ $p < .001$
$*^4$ $p < .0001$

[2] The Scale number is in parentheses: 2 - Emotional Tone
4 - Social Relationships, 6- Sexual Attitudes, 9 - Vocational/Educational Goals, 11 - Superior Adjustment

Table 4

Correlations[1] Between Body Image Items and Self Image Scales

Body Image Items

OSIQ Scales[2]	1 Satisfaction with changes		2 Worried about health		3 Proud of body		4 Feel Ugly/ unattractive		5 Poorly developed		6 Strong/ healthy	
	F	M	F	M	F	M	F	M	F	M	F	M
1. Impulse Control		13	22	30		33	25	41	26	28	26	21
2. Emotional Tone		12	16	37	14	35	38	49	27	44	37	24
3. Body/Self Image		21	49	50	51	60	63	67	59	60	68	51
4. Social Relations		16		35	17	37	30	51	39	50	39	34
7. Family Relations			14	23	20	26	19	33	18	34	27	32
8. External Mastery	-12	13		21		30	28	38	31	42	40	31
9. Vocat/Educ Goals	12	17		23	22	26		15		21	31	23
10. Psychopathology	-16		23	41		22	26	41	28	51	23	
11. Sup Adjustment		21		21	34	32	27	31	24	32	43	38

[1]Only correlations significantly different from zero are shown. Decimal points are omitted. Items are all oriented in the same direction so that a positive correlation means an association between positive body image and the other self image scores.

[2]Two scales are missing. Most of the items from the Sexual Attitudes Scale (6) had to be deleted in one school district. The Morals Scale (7) was unreliable at this age.

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